REMARKS

Applicant respectfully requests consideration of the amendments and remarks provided herein.

Drawings

Substitute sheets are submitted to designate Figures 4 and 5 as "Conventional."

New Figure 6 is submitted herewith to explicitly show the features listed in the Examiner's 37 CFR 1.83(a) objection. No new matter has been entered.

Specification

A substitute specification is provided herewith. The substitute specification is identical in all respects to the originally-filed specification, except that "Java™" has been amended in all occurrences to be –JAVA programming language--.

Claim Rejections – 35 USC §112

Claims 5 and 16 have been cancelled.

Claims 1, 7 and 12 have been amended such that "Java™" is amended in all occurrences to be –JAVA programming language—and to change "substantially eliminating" to –reducing— as suggested by the Examiner.

Claim Rejections – 35 USC §103

Claims 1, 2, 5, 7 and 8 are rejected as being unpatentable over Alpern in view of Vanderburg in view of Liang. It is respectfully submitted that the Examiner has not set forth a proper prima facie case of obviousness. In particular, the proposed combinations of disclosures do not yield the subject matter of the claims.

All of the claims are rejected as being unpatentable over Alpern in view of various other references. However, Applicant respectfully submits that the Examiner has mischaracterized the Alpern reference. As a result, the Examiner has not made a proper showing that the combinations of references yield the claimed subject matter.

In particular, the Examiner has alleged (in part) that Alpern discloses "using a first opcode in the transition frame" as recited in claim 1, and in particular, discloses "wherein the first opcode in the transition frame includes using the first opcode to determine that the transition frame is associated with the static initializer." The Examiner cites page 216, col. 2, last paragraph, as disclosing these features. The Examiner particularly cites the "invokevirtual" bytecode.

Unfortunately, even if it is assumed that the "invokevirtual" bytecode is used to determine that the transition frame is associated with the static initializer -- a point about which Applicant presently takes no position--, the "invokevirtual" bytecode is not part of the "method frame." It is noted that the Examiner has contended that the "method invocation stacks" described in Alpern's page 216, col. 1, discloses the "transition frame" recited in the claims.

In particular, the "method invocation stacks" are described textually and also illustrated in Figure 3 of the Alpern reference. It is quite apparent that the method invocation stacks do not include the invokevirtual bytecode. Rather, it is the normal bytecode stream that would include the invokevirtual bytecode, which Alpern describes as an example of a bytecode that refers to a class that has not been loaded. Alpern describes that, when such a bytecode is encountered, "it does not load the class immediately. Rather, the compiler emits code that when *executed* first ensures that the referenced class is loaded (and resolved and instantiated) and then performs the operation." (page 216, col. 2, last paragraph; italics in original)

While the Examiner notes that "Bytecode is comprised of opcodes and resides in the transition frame," Applicant can find nothing in the cited portions of Alpern that disclose bytecode residing in the method stack The method stack includes saved nonvolatile registers, local storage, parameter spill area, compiled-method identifier, next-instruction pointer (return address) and previous frame pointer. None of this is disclosed as being "bytecode" or "opcodes," let alone an "invokevirtual" bytecode.

For at least this reason, the Examiner's allegations are insufficient to set forth a proper prima facie case that the combination of cited references yield the subject matter recited in claim 1.

The rejections of the remaining claims all depend on the Examiner's faulty premise that Alpern discloses the feature of "using a first bytecode in the transition frame." As a result, the rejections relative to the remaining claims are likewise insufficient to set forth a proper prima facie case that the combination of cited references yield the subject matter recited in those claims.

CONCLUSION

Applicant believes that all pending claims are allowable and respectfully requests a Notice of Allowance for this application from the Examiner. Should the Examiner believe that a telephone conference would expedite the prosecution of this application, the undersigned can be reached at the telephone number set out below.

Respectfully submitted,
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Amendments to the Drawings:

Substitute sheets are submitted to designate Figures 4 and 5 as "Conventional."

New Figure 6 is submitted herewith to explicitly show the features listed in the Examiner's 37 CFR 1.83(a) objection. No new matter has been entered.

Attachment: Replacement Sheets